Claims

1. An isolated polypeptide comprising an amino acid sequence which has at least 70% identity to the amino acid sequence of SEQ ID NO:2 over the entire length of SEQ ID NO:2.

2. An isolated polypeptide as claimed in claim 1 in which the amino acid sequence has at least 95% identity to SEQ ID NO:2.

3. The polypeptide as claimed in claim 1 comprising the amino acid sequence of SEQ ID NO:2.

4. The isolated polypeptide of SEQ ID NO:2.

5. A polypeptide comprising an immunogenic fragment of a polypeptide as claimed in any one of claims 1 to 4 (if necessary when coupled to a carrier) which is capable of raising an immune response which recognises the polypeptide of SEQ ID NO:2.

6. A polypeptide as claimed in any of claims 1 to 5 wherein said polypeptide is part of a larger fusion protein.

7. A polypeptide as claimed in any of claims 1 to 6 chemically conjugated to a carrier protein.

8. An isolated polynucleotide encoding a polypeptide as claimed in any of claims 1 to 6.

9. An isolated polynucleotide comprising a nucleotide sequence encoding a polypeptide that has at least 70% identity to the amino acid sequence of SEQ ID NO:2, over the entire length of SEQ ID NO:2; or a nucleotide sequence complementary to said isolated polynucleotide.

10. An isolated polynucleotide comprising a nucleotide sequence that has at least 70% identity to a nucleotide sequence encoding a polypeptide of SEQ ID NO:2, over the entire coding region; or a nucleotide sequence complementary to said isolated polynucleotide.

11. An isolated polynucleotide which comprises a nucleotide sequence which has at least 70% identity to that of SEQ ID NO:1 over the entire length of SEQ ID NO:1; or a nucleotide sequence complementary to said isolated polynucleotide.

12. The isolated polynucleotide as defined in any one of claims 8 to 11 in which the identity is at least 95%.

13. An isolated polynucleotide selected from:
(a) a polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:2;
(b) the polynucleotide of SEQ ID NO:1; and
(c) the polynucleotide obtainable by screening an appropriate library under stringent hybridisation conditions with a labelled probe having the sequence of SEQ ID NO:1 or a fragment thereof said polynucleotide encoding a protein (if necessary when coupled to a carrier) which is capable of raising an immune response with recognises the protein of SEQ ID NO:2 or a nucleotide sequence complementary to said isolated polynucleotide.

14. An expression vector comprising an isolated polynucleotide according to any one of claims 8-13.

15. A recombinant live micro-organism comprising the expression vector of claim 14.

16. A host cell comprising the expression vector of claim 15 or the isolated polynucleotide of claims 8-13.

17. A process for producing a polypeptide of claims 1 to 7 comprising culturing a host cell of claim 16 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.

18. A vaccine comprising an effective amount of the polypeptide of any one of claims 1 to 7 and a pharmaceutically acceptable carrier.

19. A vaccine comprising an effective amount of the polynucleotide of any one of claims 8 to 13 and a pharmaceutically effective carrier.

20. A vaccine comprising an effective amount of antigen presenting cells, modified by *in vitro* loading with a polypeptide of any one of claims 1 to 7, or genetically modified *in vitro* to express a polypeptide of claims 1 to 7, and a pharmaceutically effective carrier.

21. A vaccine as claimed in any one of claims 18 to 20 which additionally comprises a TH-1 inducing adjuvant.

22. A vaccine as claimed in claim 21 in which the TH-1 inducing adjuvant is selected from the group of adjuvants comprising: 3D-MPL, QS21, a mixture of QS21 and cholesterol, and a CpG oligonucleotide.

23. An antibody immunospecific for the polypeptide or immunological fragment as claimed in any one of claims 1 to 5.

24. A method for screening to identify compounds which stimulate or which inhibit the function of the polypeptide of any one of claims 1 to 5 which comprises a method selected from the group consisting of:

(a) measuring the binding of a candidate compound to the said polypeptide (or to the cells or membranes bearing the polypeptide) or a fusion protein thereof by means of a label directly or indirectly associated with the candidate compound;

(b) measuring the binding of a candidate compound to the said polypeptide (or to the cells or membranes bearing the polypeptide) or a fusion protein thereof in the presence of a labelled competitor;

(c) testing whether the candidate compound results in a signal generated by activation or inhibition of the said polypeptide, using detection systems appropriate to the cells or cell membranes bearing the polypeptide;

(d) mixing a candidate compound with a solution containing a polypeptide of any one of claims 1 to 7, to form a mixture, measuring activity of the polypeptide in the mixture, and comparing the activity of the mixture to a standard; or

(e) detecting the effect of a candidate compound on the production of mRNA encoding said polypeptide and said polypeptide in cells, using for instance an ELISA assay.

25. A method for the treatment of a subject by immunoprophylaxis or therapy comprising *in vitro* induction of immune responses to a molecule of any one of claims 1 to 5, using *in vitro* incubation of the polypeptide of any one of claims 1 to 7 or the polynucleotide of any of claims 8 to 13 with cells from the immune system of a mammal, and reinfusing these activated immune cells to the mammal for the treatment of disease.

26. A method as claimed in claim 25 wherein the treatment is for ovarian or colon cancer.

27. An agonist or antagonist to the polypeptide of claims 1 to 5.

28. A compound which is:

(a) an agonist or antagonist to the polypeptide of claims 1 to 5;

(b) an isolated polynucleotide of claims 8 to 13; or

(c) a nucleic acid molecule that modulates the expression of the nucleotide sequence encoding the polypeptide of any one of claims 1 to 5;

for use in therapy.

29. A process for diagnosing a disease or a susceptibility to a disease in a subject related to expression or activity of a polynucleotide of any one of claims 8 to 13 in a subject comprising analysing for the presence or amount of said polynucleotide in a sample derived from said subject.

30. A process for diagnosing a disease or a susceptibility to a disease in a subject related to expression or activity of a polynucleotide of any one of claims 8 to 13 in a subject comprising analysing for the presence or amount of said polynucleotide in a sample derived from said subject.

31. A process for diagnosing the presence of colon cancer or a susceptibility to colon cancer in a subject related to expression or activity of a polypeptide of any one of claims 1 to 5 in a subject comprising analysing for the presence or amount of said polypeptide in a sample derived from said subject.

32. A process for diagnosing the presence of colon cancer or a susceptibility to colon cancer in a subject related to expression or activity of a polynucleotide of any one of claims 8 to 13 in a subject comprising analysing for the presence or amount of said polynucleotide in a sample derived from said subject.

33. An isolated polynucleotide selected from the group consisting of:

(a) an isolated polynucleotide comprising a nucleotide sequence which has at least 70% identity to SEQ ID NO:3 over the entire length of SEQ ID NO:3;

(b) an isolated polynucleotide comprising the polynucleotide of SEQ ID NO:3;

(c) the polynucleotide of SEQ ID NO:3.

34. A live vaccine composition comprising an expression vector according to claim 14 or a recombinant live micro-organism according to claim 15.

35. Use of a polynucleotide as claimed in any one of claims 8 to 13 for the manufacture of a medicament in the treatment of carcinoma.

36. Use of a polynucleotide as claimed in any one of claims 8 to 13 for the manufacture of a medicament in the treatment of colon carcinoma.

37. Use of a polypeptide as claimed in any one of claims 1 to 7 for the manufacture of a medicament in the treatment of carcinoma.

38. Use of a polypeptide as claimed in any one of claims 1 to 7 for the manufacture of a medicament in the treatment of colon carcinoma.